

# The Wrack Line

Newsletter of Parker River National Wildlife Refuge • Newburyport, MA



United States Fish & Wildlife Service

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## Master Naturalists Move to Next Phase

By Matt Poole, Visitor Services Manager

The Refuge launched its Master Naturalist Program in January, 2012. The idea was a simple one – to recruit and train a group of Refuge volunteers who would have the passion, knowledge and ability to develop and deliver a range of environmental education and interpretive programs to a variety of target audiences. The *formal* phase of the inaugural run of the program will end on February 23<sup>rd</sup>, when the 18 program participants will learn about mammals and their tracks with local tracking expert Bob Metcalf. But notice I emphasized that only the “formal” phase will end!

As I told the Master Naturalist participants on day one of their program, it would be up to them to decide upon both the topic(s) and target audience(s) for the programs they would ultimately develop and deliver. And, to be sure, not every one of the participants had the same comfort level with the rather non-specific nature of my vision regarding their future role in supporting the Refuge’s visitor services program! That understandable reaction was what has led to the next phase in their development as environmental educators and interpreters – a decidedly more *informal* phase. Essentially, refuge staff, along with several of the Master Naturalist Program participants, will continue to provide the group with informal training and other enrichment opportunities over time. As an example, program participant Patty Evans is planning to show the



Winter has settled in on the Refuge. Wind and water make constant changes in the sand.

Photo: Matt Poole/FWS

group how to build slide shows using a free on-line service called Smilebox.com. She has used this web site to create a whole series of slide presentations that chronicle the various Master Naturalist Program training sessions. Such informal training sessions will serve the dual purposes of continuing to build capacity in our Master Naturalists while helping to build-on and maintain that important sense of team.

Many of the Master Naturalist Program participants are beginning to “step-in and step-up.” A bunch of folks will soon be trained to lead Behind the Scenes tours – the Refuge’s primary interpretive program for reaching a captive audience with the compelling story of Parker River NWR and Plum Island. Others have indicated interest in leading, or co-leading, some of the Refuge’s more traditional programs such as summer tide pooling. Still others are already working on new program ideas or are looking at ways to adapt existing programs for new audiences. Alix McCardle and Lois Pinton are working together on a variation of the Behind the Scenes Tour for elders who live in nursing homes and extended care facilities. So, the approach appears to be working!



## “What’s This About an Urban Wildlife Refuge?”

By Matt Poole, Visitor Services Manager

One of the goals in the new vision document for the National Wildlife Refuge System (NWRS) focuses on engaging urban audiences about wildlife, their habitats, and conservation as it exists within the urban environment. The need to significantly grow public awareness and support for the both the NWRS and the U.S. Fish and Wildlife Service missions was also identified as an important priority. It was within this strategic visioning context that the Refuge was successful in securing a small pot of grant funding to work on a new urban wildlife refuge project within the City of Lowell.

## Let’s Get Outside!

By Matt Poole, Visitor Services Manager

Fueled by Department of Interior Secretary Ken Salazar’s passion for getting the American public outdoors to engage in healthy and fun recreational activities, the Refuge will be conducting a new special event in middle June that is intended to do just that! Called, simply, *Let’s Get Outdoors*, the event will provide participants with the opportunity to tryout or sample a range of outdoor recreational pursuits including archery target shooting, surf fishing, nature photography, birding, sea kayaking, and even a GPS-based scavenger hunt on the refuge. The event rests on the (hopeful) assumption that by exposing people to fun and healthy outdoor activities, they will seek more of the same (while perhaps spending less time indoors doing less healthy things). Perhaps the event will even inspire some folks to spend more time outdoors at Parker River NWR, or on some of the other 550+ units that comprise the National Wildlife Refuge System!



**Inevitably, the Refuge’s new Urban Wildlife Refuge project in Lowell will include a focus on the mighty Merrimack River. This is the historic Pawtucket Dam near downtown Lowell.** Photo: Matt Poole/FWS

Why focus on Lowell, Massachusetts you ask? Well, there are multiple answers to that question, but I’ll give you just two here!: First, the Refuge and the City are connected by the Merrimack River. That hydrological, physical connection provides all sorts of opportunities



for comparing and contrasting natural resource issues between the Refuge and a very urban landscape. Second, Lowell represents the prototypical “socioeconomic landscape” that the framers of the vision document likely had in mind when they wrote about the need to engage urban audiences. Often referred to as the “Birthplace of the Industrial Revolution,” and having endured more than its fair share of hard times, Lowell has one of the most diverse populations of any community in Massachusetts. In short, it’s a good place for us to be.

Our project, supported by one year (FY2013) funding that was awarded through the Service’s *Connecting People with Nature* grant program, has three simple objectives:

- Establish a new partnership with like-minded, intra-city stakeholders;
- Identify an existing parcel of publicly-accessible conservation land within the city where an (overlay) “urban wildlife refuge” will be established as a place where urban residents can learn about wildlife, their habitats and conservation;
- Establish and lead a team of teen Conservation Ambassadors to identify and implement certain discrete interpretive “products and programs” that will serve to leverage the value of the new urban wildlife refuge as a place where the local public can learn about and enjoy wildlife and their habitats.

As of this writing, the partnership has been established and planning is underway. Thanks to the efforts of two of the intra-city partners, a team of urban teens has just been pulled together. Next steps include final selection of the urban refuge site (which is likely to be on the lower Concord River within an established greenway); designing and implementing a two week “Urban Refuge Academy” that will introduce the Conservation Ambassadors to native wildlife, their habitats, and some of the conservation challenges being managed both on

the Parker River NWR and within the City of Lowell; and lots of other exciting “stuff!”

Engaging and working with urban audiences is a new experience for most national wildlife refuges. I look forward to keeping our readers updated about this new project in future editions of this newsletter. Stay tuned!



Fifteen lucky members of the Refuge's Photographic Society, selected by lottery, recently had the chance to photograph raptors up close during a photo shoot at the Center for Wildlife in York, Maine.

## Photographic Society Update

By Matt Poole, Visitor Services Manager

Boffo! If someone asked me to characterize, in one word, how things are going with our very own Photographic Society of Parker River NWR, that’s the word I would use. Most new volunteer-driven organizations begin with a small head of steam and, hopefully, over time, begin to build momentum. Such has been the case with our photo club. Now more than a year into this new grand adventure, our informal membership stands at about 200 strong. The refuge parking lot is almost nearly full on the second Saturday afternoon of every month, reflecting robust interest in the club’s monthly general member meetings. A dedicated photo club group on Facebook enjoys active, enthusiastic participation by a whole bunch of club members.

Recently, in an effort to further bolster interest and participation in the club, we started scheduling early morning photo shoots on the same Saturdays when the meetings are held. So far the photo shoots have taken place at the refuge, Salisbury State Reservation, and on the north end of Plum Island. There is talk of going much further afield in order to capture compelling images of nature and wildlife! Informal “meet and greets,” sandwiched in between the photo shoots and general member meetings, have further galvanized interest and participation. All of these activities are planned, implemented, and otherwise supported by a wonderful and dedicated group of volunteer board members. Without their commitment and hard work, the club’s success would not have been possible!



The refuge visitor center has a new exhibit thanks to the photo club and its members. A new wall-mounted television, located just inside the front doors, displays a monthly slide show, set to music, and comprised of photo club members’ images. Because a new slide show is created every month for the photo club meetings, it made total sense to share these beautiful presentations with refuge visitors. It also gives our club members an opportunity to share their work with a broader audience. It’s a win-win all the way around! **(A special note of thanks is owed to refuge volunteer Rick Miller for building the new cabinet that houses the electronic components for this new exhibit!)**

## Are Salt Marshes Keeping Up

### With Sea Level Rise?

By Hannah Barthelemy

Many people pass by salt marshes every day, but few know just how important salt marshes are to our environment. Salt marshes are very fragile ecosystems that support many species from insects and worms, to birds and many other animals.

The Gulf of Maine Institute (GOMI) had a series of educational events for high school students during the summer of 2012. During one of the events, Susan Adamowicz LMRD Biologist, USFWS, showed the students how she is monitoring salt marshes. She is investigating whether salt marshes are keeping up with the rate of sea level rise. It is important that salt marshes stay ahead of sea level rise because so many animals and plants depend on them for survival. If the rate of sea level continues to accelerate, salt marshes could become too flooded to survive.

The soil of a salt marsh is called peat; peat is not solid like the soil of a forest, and its elevation is constantly changing. Peat is made up of roots, decaying plant matter, and nutrients from the rivers that flow through the marsh. Since these components are constantly changing then elevation is constantly changing. Rivers that flow through a salt marsh add sediments and other substances to the peat which causes the elevation of a salt marsh to increase. If there isn’t good drainage for the soil, then the amount of water will increase and the salt marsh plants will begin to die, as seen below:



**Figure 1 Moody Marsh, Maine**

The U.S. Fish and Wildlife Service, Mass Audubon, and their partners have been studying salt marshes and have worked hard to keep them balanced and healthy.



They use a couple different ways to monitor the elevation. One way is to use a fine white powder such as feldspar.



**Figure 2 Feldspar serves as a marker horizon to help study sediment accumulation.**

By putting this white marker horizon on the salt marsh surface, the peat that accumulates above it can be measured over time.



**Figure 3 A soil sample shows the sediment collected above (to the right) of the white marker horizon.**

A Surface Elevation Table (SET) provides a companion to the measurements made with feldspar, but is an expensive unit in terms of cost and time commitment.

The SET has nine holes to allow thin fiberglass pins to be inserted, and gently placed on the surface on the salt marsh. Clips are placed on each pin and as the surface of the peat changes, the height of the pins above the marsh will reflect changes in marsh elevation. The rate of elevation change will determine the future of marshes.



**Figure 4 Gulf of Maine Institute Participants help Susan Adamowicz set up a Sediment Elevation Table (SET)**

As of now the elevation change of salt marshes in the Great Marsh is staying ahead of the rate of sea level rise. Not all salt marshes, however, are doing as well as the Great Marsh. The stress of sea level rise, in addition to other stressors such as sediment depletion and

excess nutrients have been an overwhelming combination to the Jamaica Bay salt marsh in New York. Reducing nutrient use in the surrounding watershed is one way to reduce stress to local salt marshes.



**Figure 2 Jamaica Bay, New York former salt marsh has not kept up with sea level rise. Photo by Charley Roman**

It is an important time to make sure that our actions today allow these important ecosystems to continue to thrive in the future. Reducing our carbon emissions today will help reduce the rate of sea level rise in the future. Simple actions such as changing our lightbulbs to more efficient ones, maintaining tire pressure in our cars, and washing our laundry in cold water are great initial steps toward helping. For additional ideas go to <http://www.massaudubon.org/renewableenergy/whatcanido.php>

The survival of salt marshes will have a ripple effect on all the life that depends on it, including human beings. Through monitoring and education we will be able to enhance the health of local salt marshes. If you want to help contact Liz Duff [lduff@massaudubon.org](mailto:lduff@massaudubon.org)

## **Snowy Owls on Plum Island**

By Jean Adams, Outdoor Recreation Planner

If you visit the Refuge from November to mid-March, you might be lucky enough to spot one of the Refuge's most popular and exciting visitors, the snowy owl. When fall arrives, this distinct owl may fly southward from its Arctic home in search of food. Often, they will stay near the U.S.-Canadian border but may fly as far south as the Gulf of Mexico. One of the places they seem to prefer is the Parker River Refuge.

Why would the Refuge be so inviting to these birds? Because it is similar to their Arctic habitat: open with very few trees. With the Refuge's open salt marsh, treeless dunes, and undeveloped beach, the owl has plenty of opportunity to see its prey such as mice, meadow voles, squirrels, songbirds, and waterfowl. Their keen eyesight and excellent hearing allow them to scan large areas as they perch on a Refuge post or solitary pine tree. They can detect any trace of movement in the marsh grass or shrub thicket and move in quickly to snap up their supper.

Not all snowy owls are snowy white. Although a mature male snowy owl is hard to mistake for anything else with its nearly pure white plumage, females can be mottled with brown, and a juvenile can be dusty-gray or dusky-brown in color. The legs of the snowy are fairly distinct, with feathering all the way down to their black talons. It is almost like they are wearing warm feather booties!



Because these birds often are well camouflaged, meaning they blend in with their surroundings, it is sometimes difficult to spot them. A snowy owl can sit on a low stump in the marsh or directly on the ground and not move for hours. It takes a keen eye and plenty of patience to be able to find these birds, especially since they are often far out in the marsh. It is best to try and see them during the early morning hours or at dusk when they are most active. It is also a good idea to bring



along a pair of binoculars or even a spotting scope to get a better look.

No matter where this beautiful bird spends its winter, it will always return to the Arctic to lay its eggs. The female will sit on the nest while the male will hunt and bring her food. When they hatch, she will begin to help with the hunting. During the summer, the young snowy owlets will learn how to hunt and by winter will be able to live on their own. Perhaps you will see them next year on the Refuge. It is always fun and exciting to find them here.



## ***In Her Own Words: Meet Veteran Volunteer Gene Landis***

By Jean Adams, Outdoor Recreation Planner

Gene Landis has volunteered for the last 12 years at Parker River NWR. Although she works long stressful hours as a pediatric nurse practitioner in Lawrence, she still finds time to work at the Refuge. She has been a plover warden, worked the desk at the visitor contact station and headquarters, and has been one of the gatehouse volunteers (a very specialized task that

requires a lot of training, multi-tasking, and the ability to handle stressful situations).

I asked Gene a few questions about being a refuge volunteer. Here is what she had to say:

### **What is your favorite thing about volunteering?**

I enjoy the visitor. They are almost always happy to be paying the refuge a visit and are usually appreciative of the place. I also think that the refuge and, by extension, its volunteers serve a useful purpose. Keeping parts of our world wild is crucial not only to the survival of the animals with which we share the planet, but to our own peace of mind. And, like the visitors, I enjoy the beauty that surrounds me at the refuge.

I also have to say that Jean Adams is wonderful. She vigorously supports the volunteers and has a terrific sense of humor. I'm not sure I would have continued for my twelve years were it not for the way she makes the work pleasant.

### **Any standout moments as a volunteer?**

There have been many. I will cite two. One winter when I was at the Gate House we would be visited regularly by a short-eared owl. I loved seeing him. Another time, when I was working as a plover warden, a baby plover wandered from its enclosure and came within yards of my post. It was pretty exciting.

### **Any advice for potential volunteers?**

Whatever role you play as a volunteer, you will be working with the public. Therefore, it's imperative that you bring to the "job" patience and a good sense of humor.

## **Mark Your Calendars!: March 30<sup>th</sup> Treasure Hunt/Beach Cleanup**

*Invite your friends for an hour  
or two at the beach!*

On Saturday March 30, from 9AM – 4PM all are invited to come to Lot #1 (just past the Gatehouse

entrance to the Refuge)...pick up a large plastic bag or two...and look for “treasures” on the beach.



After getting their bags, folks may be directed to drive to one of several beach access points.



As the bags are filled, they should be tied closed and left at the high water line. A ranger with a beach vehicle will come by and pick up the filled bags.



Last year over 1.5 tons of litter, trash and debris were collected by 116 women, men and kids.

## Enjoying Winter Wildlife: *Observation Etiquette*

Refuges are meant to be resting areas for all wildlife. During the winter months, animals are in a highly stressed state. Often, the animal has travelled long distances having been pushed out of their normal territories by more mature individuals, harsh weather, and scarcity of food.

This time of year, the snowy owl is a prime example of wildlife in transition and in need of undisturbed resting areas. You may be tempted to get closer to this stunning bird, but remember that they are stressed and wanting to conserve their energy for hunting. The fluffy white feathers are deceiving, making the bird appear healthy and well fed. This is often not the case! The bird may be emaciated. Any amount of disturbance may tip the scales towards a fatal result.

Flushing such large showy raptors may incite other birds such as crows to mob them, increasing the drain on their already low energy reserves. Just because the snowy will fly a short distance and land once again, does not mean that it is comfortable with you being there. Snowy owls, like many birds, have a “flush



distance” – meaning they will frequently move even a short to maintain a minimum space from you (or other source of disturbance).

Federal law and refuge regulations prohibit harassing or disturbing wildlife in any way. Our goal is to help these birds (as well as all wildlife) successfully survive the winter so that they can return to their breeding areas in the spring. Please keep your distance. Do not attempt to flush, “get just a little closer,” or linger in an area too long observing the animal. Remember, stress can kill even a healthy animal.



**Less than a week after the Great Blizzard of 2013, little evidence of it was to be found across the Refuge’s dune landscape.**

Photo: Matt Poole/FWS

## Volunteers Needed

Do you like to be outdoors? Do you like to talk to new people? Are you handy with a hammer? If so, you might want to consider volunteering at Parker River National Wildlife Refuge.

As the weather warms, the Refuge will become busier, the plovers will return, and the Lot 1 Visitor contact station will re-open for yet another season. Volunteers will be needed to staff the Center from mid-May to September and Plover Wardens will be needed to be on duty from April through mid-August. In addition, the harsh winter weather and heavy visitation take a toll on the boardwalks and fences. Anyone with a knack for handiwork such as fixing broken boards, hammering nails, painting and putting in fence railings might want to consider being a Refuge maintenance volunteer.

Some programs, such as the Plover Warden Program, require attending a brief orientation. There is no obligation to become a volunteer if you attend this program, but it will answer many questions you have if you are curious about volunteering.

If you are interested in learning more about volunteering at Parker River NWR, please call Jean Adams at (978) 465-5753 ext 208.

**The Wrack Line** is the (approximately!) quarterly newsletter of Parker River National Wildlife Refuge. Questions or comments about the content of this publication should be directed to Matt Poole, Visitor Services Manager, at (978) 465-5753, ext. 210. Email: [matt\\_poole@fws.gov](mailto:matt_poole@fws.gov).

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